

ABSTRACT

High efficiency, low noise frequency tripler and method that generates an enhanced third harmonic of a frequency and suppresses the fundamental frequency component in the tripler output. The method comprises multiplying a constant plus a twice frequency component by a square wave at the fundamental frequency, such as by a modulator. The amplitude of the twice frequency component relative to the constant and the phase of the twice frequency component relative to the phase of the square wave are chosen to reduce the fundamental frequency component and enhance the third harmonic in the tripler output. An implementation using a differential Colpitts oscillator is disclosed.

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